

AMANA1 -- 10/820,148
Client/Matter: 061069-0309151

REMARKS

Claims 1-21 are currently pending. By this amendment, claims 1-10 are amended and claims 12-21 are newly added. No new matter is added. Reconsideration and allowance in view of the above-outlined amendments and the following remarks are respectfully requested.

Applicant appreciates the indication of allowable subject matter in claims 2, 3 and 5-10. In response, claims 2, 3 and 5-10 are rewritten in independent form as claims 14-21. Applicant respectfully submits that claims 14-21 are in condition for allowance.

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,236,515 to Yamamoto et al. ("Yamamoto"). This rejection is respectfully traversed.

Yamamoto discloses in Figure 85 a zoom lens system having first, second and third lens units Gr1, Gr2, and Gr3. The first and second lens units Gr1 and Gr2 have positive power. The third lens unit Gr3 has negative power. During zooming from a wide-angle end to a telephoto end, all of the lens units are moved toward the object side such that the distance between the first and second lens units Gr1 and Gr2 increases and the distance between the second and third lens units Gr2 and Gr3 decreases. The first lens unit Gr1 includes a first lens element L1 formed as a negative meniscus lens element that is concave to the object side, and a second lens element L2 formed as a positive meniscus lens element that is convex to the object side. The second lens unit Gr2 includes a third lens element L3 having a negative power and having aspherical surfaces on both sides, and a fourth lens element L4 formed as a positive meniscus lens element that is concave to the object side. The third lens unit Gr3 includes a fifth lens element L5 formed as a biconcave lens element having aspherical surfaces on both sides and having a diffractive optical surface on the object side. An aperture diaphragm S is provided between the first and second lens units Gr1 and Gr2 so as to move together with the second lens unit Gr2 during zooming.

By contrast, amended claim 1 is directed to an image forming optical system. The image forming optical system includes a first lens which is a meniscus lens having positive refractive power and a convex surface directed toward the object side. The optical system further includes an aperture stop and a second lens. The second lens is a meniscus lens having positive refractive power and a convex surface directed toward an image. A third lens has negative refractive power. The aperture stop is arranged adjacent to the first lens, the second lens is arranged adjacent to the aperture stop, and the third lens is arranged adjacent to the second lens.

AMANA -- 10/820,148
Client/Matter: 061069-0309151

Yamamoto does not disclose, teach or suggest the image forming optical system set forth in amended claim 1. While Yamamoto may arguably include a first lens L2 which is a meniscus lens having positive refractive power and a convex surface directed toward the object side, Yamamoto does not disclose a second lens, which is a meniscus lens having positive refractive power and a convex surface directed toward an image side whereby an aperture stop is positioned between the first lens and the second lens. In Yamamoto, the aperture stop S is positioned between lens L2 and lens L3. Lens L2 is a positive meniscus lens element that is convex to the object side. Lens element L3 has a negative power and having aspherical surfaces on both sides. As such, Yamamoto does not disclose the claimed second lens positioned adjacent the aperture stop. The lens element L3 in Yamamoto does not have positive refractive power. Furthermore, the lens element L3 includes aspherical surfaces on both sides. Accordingly, applicant respectfully submits that Yamamoto fails to disclose the subject matter of claim 1. Claims 2-11 depend from claim 1 and are allowable over Yamamoto for at least the same reasons.

Newly added claim 12 is directed to an image forming optical system consisting of a first lens which is meniscus lens having positive refractive power and a convex surface directed toward an object side, an aperture stop, a second lens which is meniscus lens having positive refractive power and a convex surface directed toward an image side, and a third lens having negative refractive power. As discussed above in connection with claim 1, Yamamoto fails to disclose teach or suggest the claimed second lens having a positive refractive power and a convex surface directed toward an image side. Accordingly, applicant respectfully submits that Yamamoto fails to disclose the subject matter of claim 12.

Newly added claim 13 is directed to an image forming optical system comprising a first lens which is meniscus lens having positive refractive power and a convex surface directed toward an object side, an aperture stop, a second lens which is meniscus lens having positive refractive power and a convex surface directed toward an image side, and a third lens having negative refractive power, wherein the aperture stop and all lenses are fixedly positioned. As discussed above in connection with claim 1, Yamamoto fails to disclose teach or suggest the claimed second lens having a positive refractive power and a convex surface directed toward an image side. Accordingly, applicant respectfully submits that Yamamoto fails to disclose the subject matter of claim 13.

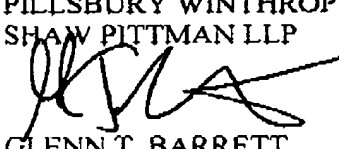
AMANA -- 10/820,148
Client/Matter: 061069-0309151

Applicant respectfully submits that claims 1-13 are allowable over Yamamoto for the reasons stated above. Reconsideration and withdraw of any rejection based upon Yamamoto are respectfully requested.

Claim 11 was rejected under 35 U.S.C. § 103(a) over Yamamoto in view of U.S. Patent No. 6,778,777 to Fujii et al. ("Fujii"). This rejection is respectfully traversed.

The Office Action correctly notes that Yamamoto does not disclose that the lens system may be used in an electric device. The Office Action relies on Fujii, which discloses a camera for allegedly teaching this deficiency. Fujii, however, fails to disclose the details of its lens system. As such, Fujii fails to teach the deficiencies in Yamamoto discussed above in connection with claim 1. Therefore, the combination of Yamamoto and Fujii does not render obvious the subject matter of claim 11. Applicant respectfully submits that claim 11 are allowable over the combination of Yamamoto in view of Fujii for the reasons stated above. Reconsideration and withdraw of the rejection based upon Yamamoto and Fujii are respectfully requested.

Applicant respectfully submits that claims 1-21 define subject matter that is patentable over the prior art cited of record. It is respectfully submitted that the application is in condition for allowance. Should further issues require resolution prior to allowance, the Examiner is requested to telephone applicant's undersigned attorney at the number below. Reconsideration and allowance of the above-identified application in view of the above amendments and the following remarks are respectfully requested. Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any overpayment.

Respectfully submitted,
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